

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P/63751/SDI	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IB 03/05605	International filing date (day/month/year) 29.09.2003	Priority date (day/month/year) 30.09.2002
International Patent Classification (IPC) or both national classification and IPC H04L12/24		
Applicant MARCONI INTELLECTUAL PROPERTY (RINGFENCE) INC. et		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.
 - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 13.04.2004	Date of completion of this report 26.01.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Gavriliu, B-A Telephone No. +31 70 340-2324



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/05605

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-13 as originally filed

Claims, Numbers

1-43 as originally filed

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2,7,8,16-18,22-31,37-39
	No: Claims	1,3-6,9-15,19-21,32-36,40-43
Inventive step (IS)	Yes: Claims	
	No: Claims	1-43
Industrial applicability (IA)	Yes: Claims	1-43
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

- 1 Reference is made to the following documents:

D1: US-A-5 261 044 (DEV ROGER H ET AL) 9 November 1993
D2: US-A-5 991 264 (CROSLIN WILLIAM D) 23 November 1999
D3: US-B-6 199 1721 (ARSENAULT MICHAEL ET AL) 6 March 2001

- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 3-6, 9-15, 19-21, 32-36 and 40-43 is not new in the sense of Article 33(2) PCT and because the subject-matter of claims 2, 7, 8, 16-18, 22-31 and 37-39 does not involve an inventive step (Article 33(3) PCT).

2.1 INDEPENDENT CLAIM 1

Document D1 discloses in terms of claim 1 (the references in parenthesis applying to this document):

A method of monitoring the status of one or more network elements NEs linked together in a telecommunication network (column 3, lines 15 - 29), comprising receiving a down status notification from a NE in the network (column 5, lines 27 - 40 and column 7 lines 54 - 59), identifying one or more other NEs which are linked to the NE (column 11, lines 17 - 24 and column 11, lines 34 - 43), polling the or each other NE to determine the status thereof (column 11, lines 20 - 28 and column 11, lines 40 - 53).

Since all the features of claim 1 are known in combination from document D1, the subject-matter of claim 1 is not new (Article 33(2) PCT).

It is noted that the lack of novelty of claim 1 may as well be demonstrated along the disclosure of documents D2 and D3 (see passages cited in the international search report).

Please refer also to section 3 further below.

2.2 INDEPENDENT CLAIMS 35, 40, 42 and 43

Claims 35, 40, 42 and 43 are representations of claim 1 covering essentially the

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same-subject matter with different terminology, in terms of respectively a computer program product, a system, a computer readable medium and a program storage device, and the above arguments with respect to lack of novelty of claim 1 similarly apply to claims 35, 40, 42 and 43 (see D1, column 4, line 58 - column 5, line 6 for computer implementation and column 4, lines 13-18 for program storage device). Consequently, the subject-matter of claims 35, 40, 42 and 43 is not new (Article 33(2) PCT).

- 2.3 The feature "**whose operation is directed by the computer program product according to any of the claims 35 to 39**" does not imply any technical features which are clearly limiting the scope of the independent computer system claim 41 (Article 6 PCT). Hence the only technical feature disclosed in claim 41 is "**a computer system**".

Since D1 discloses "**a computer system**" see column 4, lines 58-67, the subject-matter of the above mentioned claim 41 is not novel (Article 33(2) PCT).

- 2.4 Dependent claims 2-34 and 36-39 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect to novelty and/or inventive step (Article 33(2) and (3) PCT), the reasons being as follows:

- 2.4.1 The additional features of claims 3-6, 9, 14, 15, 19-21, 32-34 and 36 are already known from the document D1:

- Claims 3 and 4 see column 10, line 62 - column 11, line 11;
- Claim 5 see column 11, lines 17-25 and lines 34-43;
- Claims 6, 14 and 15 see column 4, lines 18-31 and column 7, lines 25-39;
- Claim 9 see column 8 lines 21-32;
- Claims 32 and 33 see column 2, line 53 - column 3, line 28;
- Claim 34 see column 5, lines 44-48.

The subject-matter of claims 3-6, 14, 15, 19-21, 32-34 and 36 is therefore not new (Article 33(2) PCT).

- 2.4.2 The additional features of claims 10-13 are already known from document D2 see column 4, line 52 - column 5, line 8 and column 7, line 50 - column 8, line 34. The subject-matter of claims 10-13 is therefore not new (Article 33(2) PCT).

- 2.4.3 The additional features of claims 2, 7, 8, 16-18, 22-31 and 37-39 are a matter of normal design procedure for a man skilled in the art of network monitoring.

Therefore the subject-matter of claims 2, 7, 8, 16-18, 22-31 and 37-39 does not involve an inventive step (Article 33(3) PCT).

- 3 The following is added to further support the above reasoning with respect to lack of novelty of independent claim 1 and corresponding independent claims 35, 40, 42 and 43.

3.1 Document D1

It might be argued that D1 does not disclose that the receipt of a fault notification is followed by identifying the neighbouring Network Elements and polling of such Neighboring Network Elements in order to determine which Neighboring Network Element is at fault. However, in D1 the network management system "**sets a fault status and initiates a fault isolation technique**" (see column 11, lines 16 - 17) which does determine "**whether adjacent models have lost contact with their corresponding network devices**" (see column 11, lines 20 - 22) wherein the "**adjacent network devices are defined as those which are directly connected to a specified device**" (see column 11, lines 22 - 24). Also from the passage (column 11, lines 24 - 25) "**if adjacent models cannot contact the corresponding network devices**" it can be directly and unambiguously derived that the adjacent network devices are polled by their corresponding models when trying to contact them.

- 3.2 It might also be argued that the claimed subject-matter has the advantage over D1 that not all Network Elements need to be polled thereby saving time, processing resources and network capacity when sourcing faulty Network Elements. However the same result is achieved by the network management disclosed in D1 by the use of a "**fault isolation technique**" during which only adjacent models and the corresponding adjacent network devices are contacted to detect the source of a fault (see paragraph 3.1 above).

- 3.3 It should be noted that the features of :

- Network Management System and
- triggering of a search

are not specified in the current independent claims 1, 35, 40 and 42 and are therefore at present not relevant for assessing novelty and/or inventive step of the mentioned claims.

For the sake of completeness, however, it is mentioned that these features are disclosed in D1:

- Network Management System (see abstract)
- triggering of a search (see column 11, lines 14 - 17).

3.4 Document D2

It is clear to the person skilled in the art that the routine performed in the network control center for isolating a failure within the network as disclosed in D2 (column 8, lines 1 - 3) has the following steps:

- receiving a down status notification as in claim 1 ("**selects one of the received alarms**", see column 8, lines 12 - 13, which can be "**of the type to indicate that help indicate the direction towards the point of failure**", see column 8, lines 20 - 22);
- identifying one or more Network Elements which are linked to the NE as in claim 1 ("**retrieves the logical topology data for the trunk associated with the alarm**", see column 8, lines 24 - 25, wherein "**the retrieved logical topology data identifies all nodes and ports traversed by selected trunk**", see column 8, lines 27 - 29. From the last passage it can be directly and unambiguously derived that the nodes and the ports from the retrieved logical topology are linked to the faulty trunk);
- polling the or each other NE to determine the status thereof as in claim 1 ("**collects all alarms from nodes traversed by the selected trunk**", see column 3, lines 16 - 18. In this passage it is implicitly disclosed that the linked nodes are polled in the process of alarm collection and that alarms provide the status of each node).

3.5 Document D3

Also document D3 does anticipate the subject matter of independent claims 1, 35, 40, 42 and 43, given that it describes a fault isolation technique wherein proxy network devices, also defined as recruit network devices, are contacted to be used to poll the faulty device and wherein "**recruit network devices are considered immediate neighbours of the down device**" (see column 5, lines 58 - 60) wherein "**neighbour refers to devices that are physically connected to each other**" (see column 5, lines 60 - 61).